

AMENDMENTSIn the claims

This listing of the claims will replace all prior versions, and listings, of the claims in the present application

Listing of the claims

47. (Currently Amended) A fabric and/or dishwashing and/or hard surface cleaning composition comprising:

(a) an effective amount of a protease variant wherein said protease variant includes a substitution of an amino acid residue with another naturally occurring amino acid residue at an amino acid residue position corresponding to position 103 of *Bacillus amyloliquefaciens* subtilisin in combination with a substitution of an amino acid residue with another naturally occurring amino acid residue at one or more amino acid residue positions corresponding to positions 1, 3, 4, 8, 9, 10, 12, 13, 16, 17, 18, 19, 20, 21, 22, 24, 27, 33, 37, 38, 42, 43, 48, 55, 57, 58, 61, 62, 68, 72, 75, 76, 77, 78, 79, 86, 87, 89, 97, 98, 99, 101, 102, 104, 106, 107, 109, 111, 114, 116, 117, 119, 121, 123, 126, 128, 130, 131, 133, 134, 137, 140, 141, 142, 146, 147, 158, 159, 160, 166, 167, 170, 173, 174, 177, 181, 182, 183, 184, 185, 188, 192, 194, 198, 203, 204, 205, 206, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 222, 224, 227, 228, 230, 232, 236, 237, 238, 240, 242, 243, 244, 245, 246, 247, 248, 249, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 265, 268, 269, 270, 271, 272, 274 and 275 of *Bacillus amyloliquefaciens* subtilisin; wherein when said protease variant includes a substitution of amino acid residues at positions corresponding to positions 103 and 76, there is also a substitution of an amino acid residue at one or more amino acid residue positions other than amino acid residue positions corresponding to positions 27, 99, 101, 104, 107, 109, 123, 126, 128, 166, 204, 206, 210, 216, 217, 218, 222, 260, 265 or 274 of *Bacillus amyloliquefaciens* subtilisin; and

(b) one or more cleaning adjunct materials

further wherein when said protease variant includes a substitution of the amino acid residues at position 103, said variant further includes a substitution of the amino acid residues at one or both of positions 236 and 245;

further wherein when said protease variant includes a substitution of the amino acid residues at positions 103 and 236, said variant further includes a substitution of the amino acid residues at one or more of the following positions: 12, 61, 62, 68, 76, 97, 98, 101, 102, 104, 109, 130, 131, 159, 183, 185, 205, 209, 210, 211, 212, 213, 215, 217, 230, 232, 248, 252, 257, 260, 270 and 275;

further wherein when said protease variant includes a substitution of the amino acid residues at positions 103 and 245, said variant further includes a substitution of the amino acid residues at one or more of the following positions: 12, 61, 62, 68, 76, 97, 98, 101, 102, 104, 109, 130, 131, 159, 170, 183, 185, 205, 209, 210, 211, 212, 213, 215, 217, 222, 230, 232, 248, 252, 257, 260, 261, 270 and 275;

wherein when said protease variant includes a substitution of the amino acid residues at positions 103, 236 and 245, said variant further includes a substitution of the amino acid residues at one or more of the following positions: 12, 61, 62, 68, 76, 97, 98, 101, 102, 104, 109, 130, 131, 159, 183, 185, 205, 209, 210, 211, 212, 213, 215, 217, 230, 232, 243, 248, 252, 257, 260, 270 and 275.

48. (Previously Presented) The cleaning composition according to Claim 47 wherein said protease variant is derived from a *Bacillus subtilisin*.

49. (Previously Presented) The cleaning composition according to Claim 47 wherein said protease variant includes substitutions of the amino acid residues at position 103 and at one or more of the following positions: 236 and 245.

50. (Previously Presented) The cleaning composition according to Claim 47 wherein said protease variant includes a substitution set selected from the group consisting of:

12/102/103/104/159/212/232/236/245/248/252;  
 12/76/103/104/130/222/245/261;  
 12/76/103/104/130/222/245;  
 61/68/103/104/159/232/236/245/248/252;  
 62/103/104/109/159/213/232/236/245/248/252;  
 62/101/103/104/159/212/213/232/236/245/248/252;  
 62/103/104/130/159/213/232/236/245/248/252;  
 68/103/104/159/232/236/245/248/252/270;  
 68/103/104/159/185/232/236/245/248/252;  
 68/103/104/159/185/210/232/236/245/248/252;  
 68/103/104/159/230/232/236/245;  
 68/103/104/232/236/245/248/257/275;  
 68/103/104/159/232/236/245/248/252;  
 68/76/103/104/159/236;  
 68/76/103/104/159/232/236/245;  
 68/103/104/159/232/236/245;  
 68/76/103/104/159/211/232/236/245;  
 68/103/104/159/210/232/236/245;  
 68/76/103/104/159/213/232/236/245/260;  
 68/76/103/104/159/210/232/236/245/260;  
 68/103/104/159/183/232/236/245/248/252;  
 68/103/104/232/236/245/257/275;  
 76/103/222/245;  
 76/103/104/159/213/232/236/245/260;  
 76/103/104/131/159/232/236/245/248/252;  
 12/76/103/104/130/170/185/222/243/245;  
 12/76/103/104/222/245;  
 62/103/104/159/213/232/236/245/248/252;  
 62/103/104/159/232/236/245/248/252;  
 68/103/104/159/213/232/236/245/248/252;  
 68/103/104/159/210/232/236/245/248/252;  
 68/103/104/159/213/232/236/245/248/252;  
 68/76/103/104/159/209/232/236/245;  
 68/103/104/213/232/236/245/248/252;  
 68/103/104/159/209/232/236/245;  
 68/76/103/104/159/236/245;  
 68/103/104/159/232/236/245/252;  
 68/103/104/159/232/236/245/257;  
 68/76/103/104/159/215/232/236/245;  
 68/103/104/159/213/232/236/245/260;  
 68/103/104/159/236;  
 68/103/104/159/236/245;  
 68/76/103/104/159/236/245;  
 68/103/104/159/213/232/236/245;  
 76/103/104/159/232/236/245;  
 76/103/104/159;  
 76/103/104/222/245;

97/103/104/159/232/236/245/248/252;  
 98/102/103/104/159/212/232/236/245/248/252; 98/103/104/159/232/236/245/248/252;  
 101/103/104/159/232/236/245/248/252; 102/103/104/159/232/236/245/248/252;  
 103/104/159/232/236/245; 103/104/159/232/236/245/248/252;  
 103/104/159/205/209/232/236/245/257 103/104/159/232/245/248/252;  
 103/104/159/205/209/210/232/236/245/257; 103/104/159/213/232/236/245/248/252;  
 103/104/159/217/232/236/245/248/252; 103/104/130/159/232/236/245/248/252;  
 103/104/159/230/236/245; 103/104/159/236/245;  
 103/104/159/248/252/270; 103/104/131/159/232/236/245/248/252;  
 103/104/159/205/209/232/236/245; and 103/104/159/232/236/245/257.

51. (Previously Presented) The cleaning composition according to Claim 50 wherein said protease variant includes a substitution set selected from the group consisting of:

12R/76D/103A/104T/130T/222S/245R;  
 12R/76D/103A/104I/222S/245R;  
 12R/102A/103A/104I/159D/212G/232V/236H/245R/248D/252K;  
 12R/76D/103A/104T/130G/222S/245R/261D;  
 12R/76D/103A/104T/130G/170S/185D/222S/243D/245R;  
 61E/68A/103A/104I/159D/232V/236H/245R/248D/252K;  
 62D/103A/104I/109R/159D/213R/232V/236H/245R/248D/252K;  
 62D/103A/104I/159D/213R/232V/236H/245R/248D/252K;  
 62D/103A/104I/159D/232V/236H/245R/248D/252K;  
 62D/103A/104I/130G/159D/213R/232V/236H/245R/248D/252K;  
 62D/101G/103A/104I/159D/212G/213R/232V/236H/245R/248D/252K;  
 68A/76D/103A/104I/159D/213R/232V/236H/245R/260A;  
 68A/103A/104I/159D/236H;  
 68A/103A/104I/159D/236H/245R;  
 68A/76D/103A/104I/159D/210L/232V/236H/245R/260A;  
 68A/103A/104I/159D/185D/232V/236H/245R/248D/252K;  
 68A/103A/104I/159D/209R/232V/236H/245R;  
 68A/76D/103A/104I/159D/211R/232V/236H/245R;  
 68A/76D/103A/104I/159D/215R/232V/236H/245R;  
 68A/103A/104I/159D/213R/232V/236H/245R/260A;  
 68A/76D/103A/104I/159D/236H;  
 68A/76D/103A/104I/159D/236H/245R;  
 68A/76D/103A/104I/159D/232V/236H/245R;  
 68A/103A/104I/159D/232V/236H/245R/252K;  
 68A/103A/104I/159D/232V/236H/245R;  
 68A/103A/104I/159D/232V/236H/245R/257V;  
 68A/103A/104I/159D/185D/232V/236H/245R/248D/252K;  
 68A/103A/104I/159D/210L/232V/236H/245R/248D/252K;  
 68A/103A/104I/159D/185D/210L/232V/236H/245R/248D/252K;

68A/103A/104I/159D/213E/232V/236H/245R/248D/252K;  
 68A/103A/104I/159D/230V/232V/236H/245R;  
 68A/76D/103A/104I/159D/209W/232V/236H/245R;  
 68A/103A/104I/232V/236H/245R/248D/257V/275H;  
 68A/103A/104I/232V/236H/245R/257V/275H;  
 68A/103A/104I/213E/232V/236H/245R/248D/252K;  
 68A/103A/104I/159D/232V/236H/245R/248D/252K;  
 68A/103A/104I/159D/210I/232V/236H/245R;  
 68A/103A/104I/159D/210L/232V/236H/245R;  
 68A/103A/104I/159D/213G/232V/236H/245R;  
 68A/103A/104I/159D/232V/236H/245R/248D/252K/270A;  
 76D/103A/222S/245R;  
 76D/103A/104I/159D/232V/236H/245R;  
 76D/103A/104I/159D;  
 76D/103A/104I/222S/245R;  
 76D/103A/104I/131V/159D/232V/236H/245R/248D/252K;  
 76D/103A/104I/159D/213R/232V/236H/245R/260A;  
 97E/103A/104I/159D/232V/236H/245R/248D/252K;  
 98L/103A/104I/159D/232V/236H/245R/248D/252K;  
 98L/102A/103A/104I/159D/212G/232V/236H/245R/248D/252K;  
 101G/103A/104I/159D/232V/236H/245R/248D/252K;  
 102A/103A/104I/159D/232V/236H/245R/248D/252K;  
 103A/104I/159D/232V/236H/245R/248D/252K;  
 103A/104I/159D/213R/232V/236H/245R/248D/252K;  
 103A/104I/130G/159D/232V/236H/245R/248D/252K;  
 103A/104I/159D/230V/236H/245R;  
 103A/104I/159D/217E/232V/236H/245R/248D/252K;  
 103A/104I/159D/236H/245R;  
 103A/104I/159D/248D/252K/270V;  
 103A/104I/159D/232V/236H/245R;  
 103A/104I/159D/205I/209W/232V/236H/245R;  
 103A/104I/159D/232V/236H/245R/257V;  
 103A/104I/159D/205I/209W/232V/236H/245R/257V;  
 103A/104I/131V/159D/232V/236H/245R/248D/252K;  
 103A/104I/159D/205I/209W/210I/232V/236H/245R/257V; and  
 103A/104I/159D/232V/245R/248D/252K.

52. (Previously Presented) The cleaning composition according to Claim 47 wherein said cleaning adjunct materials are selected from the group consisting of surfactants, solvents, buffers, enzymes, soil release agents, clay soil removal agents, dispersing agents, brighteners, suds suppressors, fabric softeners, suds boosters, enzyme stabilizers, builders, other bleaching agents, dyes, perfumes, chelants and mixtures thereof.

53. (Previously Presented) The cleaning composition according to Claim 52 wherein said cleaning adjunct materials comprise at least one detergent surfactant.

54. (Previously Presented) The cleaning composition according to Claim 53 wherein the cleaning adjunct materials comprise at least about 0.1% surfactant by weight of the composition, said surfactant comprising materials selected from the group consisting of alkyl benzene sulfonates, primary alkyl sulfates, secondary alkyl sulfates, alkyl alkoxy sulfates, alkyl alkoxy carboxylates, alkyl polyglycosides and their corresponding sulfated polyglycosides, alpha-sulfonated fatty acid esters, alkyl and alkyl phenol alkoxyates, betaines and sulfobetaines, amine oxides, N-methyl glucamides, nonionic primary alcohol ethoxylates, nonionic primary alcohol mixed ethoxy/propoxy, and mixtures thereof.

55. (Previously Presented) The cleaning composition according to Claim 54 further comprising at least about 5% builder selected from the group consisting of zeolites, polycarboxylates, layered silicates, phosphates, and mixtures thereof.

56. (Previously Presented) The cleaning composition according to Claim 52 wherein said cleaning adjunct materials comprise at least one detergent enzyme selected from the group consisting of cellulases, lipases, amylases, phospholipases, other proteases, peroxidases and mixtures thereof.

57. (Previously Presented) The cleaning composition according to Claim 52 wherein said cleaning adjunct materials comprise at least one bleaching agent selected from the group consisting of percarbonates, perborates and mixtures thereof, and optionally further comprising at least one bleach activator selected from the group consisting of benzoyloxybenzenesulphonate (BOBS), nonanoyloxybenzenesulphonate (NOBS), decanoyloxybenzenesulphonate (C<sub>10</sub>-OBS), octanoyloxybenzenesulphonate (C<sub>8</sub>-OBS), perhydrolyzable esters, 4-[N-(nonaoyl) amino hexanoyloxy]-benzene sulfonate sodium salt (NACA-OBS), lauryloxybenzenesulphonate (LOBS or C<sub>12</sub>-OBS), 10-undecenoyloxybenzenesulfonate (UDOBS or C<sub>11</sub>-OBS with unsaturation in the 10 position), and decanoyloxybenzoic acid (DOBA) and mixtures thereof, and further optionally comprising at least one bleach catalyst.

58. (Previously Presented) The cleaning composition according to Claim 47 wherein said cleaning composition is a fabric cleaning composition, in the form of a liquid, granule, bar, tablet, gel, powder or foam, comprising at least about 5% surfactant and at least about 5% builder by weight of the composition.

59. (Currently Amended) The cleaning composition according to Claim 47 wherein said cleaning composition is a fabric cleaning composition comprising:

- (a) from about 0.0001% to about 10% by weight of said protease variant;

(b) at least about 5% by weight of a surfactant selected from the group consisting of alkyl benzene sulfonates, primary alkyl sulfates, secondary alkyl sulfates, alkyl alkoxy sulfates, alkyl alkoxy carboxylates, alkyl polyglycosides and their corresponding sulfated polyglycosides, alpha-sulfonated fatty fatty acid esters, alkyl and alkyl phenol alkoxyates, betaines and sulfobetaines, amine oxides, N-methyl glucamides, nonionic primary alcohol ethoxylates, nonionic primary alcohol mixed ethoxy/propoxy, and mixtures thereof; and wherein further the builder is selected from the group consisting of zeolites, polycarboxylates, layered silicates, phosphates, and mixtures thereof; and

(c) at least about 5% by weight of a builder selected from the group consisting of zeolites, polycarboxylates, layered silicates, phosphates, and mixtures thereof.

60. (Previously Presented) The cleaning composition according to Claim 59 is in the form of a concentrated granular fabric cleaning composition comprising at least about 15% surfactant.

61. (Previously Presented) A method for cleaning fabric, said method comprising contacting a fabric in need of cleaning with a cleaning composition according to Claim 58.

62. (Previously Presented) A method for cleaning fabric, said method comprising contacting a fabric in need of cleaning with a cleaning composition according to Claim 59.

63. (Previously Presented) The cleaning composition according to Claim 47 wherein said cleaning composition is a dishwashing composition, in the form of a liquid, granule, powder, gel or tablet, comprising:

- (a) from about 0.0001% to about 10% by weight of said protease variant; and
- (b) from about 0.1% to about 10% by weight of a surfactant.

64. (Previously Presented) A method for cleaning dishes, said method comprising contacting a dish in need of cleaning with a cleaning composition according to Claim 63.

65. (Previously Presented) A personal cleansing composition comprising:

(a) an effective amount of a protease variant wherein said protease variant includes a substitution of an amino acid residue with another naturally occurring amino acid residue at an amino acid residue position corresponding to position 103 of *Bacillus amyloliquefaciens* subtilisin in combination with a substitution of an amino acid residue with another naturally occurring amino acid residue at one or more amino acid residue positions corresponding to positions 1, 3, 4, 8, 9, 10, 12, 13, 16, 17, 18, 19, 20, 21, 22, 24, 27, 33, 37, 38, 42, 43, 48, 55, 57, 58, 61, 62, 68, 72, 75, 76, 77, 78, 79, 86, 87, 89, 97, 98, 99, 101, 102, 104, 106, 107, 109, 111, 114, 116, 117, 119, 121, 123, 126, 128, 130, 131, 133, 134, 137, 140, 141, 142, 146, 147, 158, 159, 160, 166, 167, 170, 173, 174, 177, 181, 182, 183, 184, 185, 188, 192, 194, 198, 203, 204, 205, 206, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 222, 224, 227, 228, 230, 232, 236, 237, 238, 240, 242, 243, 244, 245, 246, 247, 248,

249, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 265, 268, 269, 270, 271, 272, 274 and 275 of *Bacillus amyloliquefaciens* subtilisin; wherein when said protease variant includes a substitution of amino acid residues at positions corresponding to positions 103 and 76, there is also a substitution of an amino acid residue at one or more amino acid residue positions other than amino acid residue positions corresponding to positions 27, 99, 101, 104, 107, 109, 123, 126, 128, 166, 204, 206, 210, 216, 217, 218, 222, 260, 265 or 274 of *Bacillus amyloliquefaciens* subtilisin; and

(b) one or more cleaning adjunct materials.

66. (Previously Presented). The personal cleansing composition according to Claim 65 wherein said personal cleansing composition comprises:

(a) from about 0.001% to about 5% by weight of said protease variant;

(b) from about 0.1% to about 95% by weight of a surfactant system comprising a surfactant selected from the group consisting of anionic carboxylates, amine oxides, alkyl glucosides, glucose amides, alkyl sulfates, alkyl ether sulfates, acyl isethionates, alkyl sulfosuccinates, alkyl phosphate esters, ethoxylated phosphate esters, alkyl glyceryl ether sulfonates and mixtures thereof; and

(c) optionally, from about 0.05% to about 50% by weight of an enzyme stabilizer.

67. (Previously Presented) The personal cleansing composition according to Claim 66 wherein said surfactant is soap at a level of at least about 2% by weight of the cleaning composition.

68. (Previously Presented) The personal cleansing composition according to Claim 67 wherein the ratio of soap to protease variant is from about 2,000:1 to about 8:1.

69. (Previously Presented) A method for personal cleansing, said method comprising contacting a part of the human or lower animal body in need of cleaning with a cleaning composition according to Claim 65.

70. (Previously Presented) A method for pretreating a fabric in need of cleaning, said method comprising contacting said fabric prior to washing said fabric with an aqueous solution containing a surfactant with a cleaning composition according to Claim 58.

71. (Previously Presented) A method for pretreating a fabric in need of cleaning, said method comprising contacting said fabric prior to washing said fabric with an aqueous solution containing a surfactant with a cleaning composition according to Claim 59.